LDK 150 12-BIT DIGITAL DVCPRO50 CAMCORDER

The tool of choice for DPs

All of today's cutting-edge technical know-how is used to present Directors of Photography with the ultimate in Electronic Cinematography: the LDK 150 12-bit Digital DVCPRO50 Camcorder. Based on the highly reputable quality of studio and outside broadcast cameras, the LDK 150 combines uncompromising picture quality with a full range of features to ensure the maximum of creative freedom and superb recording on DVCPRO50.

The LDK 150 completes Thomson's extensive range of camcorder products with a tool so powerful that even the most experienced Director of Photography will find new ways to exploit his craftsmanship. It looks and feels like no other camcorder and has the reliability of full-blown studio and outside broadcast cameras. It incorporates all of the functionality necessary to capture the atmosphere of classic drama or that important moment in a documentary - the way you want it. Perfectly!

Film has found its equal… DPM™ sensors

The LDK 150 12-bit Digital DVCPRO50 Camcorder concept is built around CCD technology, which provides you with unrivalled picture performance. DPM™ sensors not only allow you to make use of a 600% dynamic lighting range, they also feature true switchability between wide screen and standard aspect ratios, at the touch of a button. While doing so, both the picture resolution and the horizontal viewing angle of your lens is left unaffected. The picture information from the CCDs is handled with care throughout the LDK 150 using 12-bit A-to-D converters that easily preserve all the nuances in gray scales without the need for electronic correction.

- ***High-end picture quality for high-profile applications***
- ***True 16:9/4:3 switchability with unique DPM™ sensors***
- ***Extensive features to fully support your creativity***
- ***Smart-Touch™ software to easily optimize pictures in all situations***
- ***Smart card storage of personal picture and operational preferences***
- ***Unrivalled digital audio capabilities***
- ***Superb 4:2:2 video recording on DVCPRO50 tape***
- ***DVCPRO and DVCPRO50 switchable***
- ***Plus many other outstanding features***

DVCPRO 50

THOMSON MULTI MEDIA
BROADCAST SOLUTIONS

Advanced 22-bit digital signal processing

The LDK 150's optimum picture performance is further assured by 22-bit internal signal processing. This allows powerful features, such as, independent dual skin contour circuits, to be incorporated. Two digital signal processors handle all camera functions, including knee, gamma, contour and matrix, so that skin tones look natural even in the most demanding conditions - like fluorescent lighting.

Smart-Touch™

The highly technical aspect of adjustment to the prevailing lighting conditions or of effects you would like to add to make your pictures even more appealing to producers and audiences, has now been made easy by Smart-Touch™ software. Smart-Touch™ provides you with 14 pre-defined scene files, resetting even the most advanced digital settings of your camera to allow you to add whatever flavor you like to your production. Sepia, night scenes or the soft image of film are available at the touch of a button.

Electronic Gel Filters

By utilizing its digital capabilities, the LDK 150 is the only camcorder capable of adopting the white balance manually to produce the effect you want to add. Electronic Gel Filters let you decide what the picture should be like, whether a warm ambience for a homely scene or a cold atmosphere to stress loneliness.

Smart cards for picture continuity

When recording over a longer period of time, or when multiple camcorders are being used to shoot a scene, all picture manipulations in one camera usually work against you. With smart cards, you can easily overcome this problem. All picture parameters are stored onto these credit-card-style memory cards to be recalled at a later moment in time or to copy your creative settings to the other cameras on the scene.

DVCPRO50 4:2:2 for optimal recording.

All your efforts at making the pictures look perfect will be recorded securely on the internationally accepted and successful DVCPRO50 tape standard. 4:2:2 sampling is not only a cost-effective solution; it also ensures pictures that are hardly distinguishable form their uncompressed equivalents. However, in case your customer prefers DVCPRO25 as a standard, you can easily switch your LDK 150 recorder to meet this request as well.

Superior audio performance

As well as excellent video performance, digital processing also ensures excellent audio performance. Two pairs of 22-bit digitally processed audio channels are at your disposal for perfect recording onto DVCPRO50. Switching between different types of input signals was never this easy. The LDK 150 simply 'remembers' gain settings and control preferences…operational convenience that can never be obtained from standard camcorders. Moreover, sound engineers can feel comfortable now recording levels can be set in a menu to prevent them being altered inadvertently. Gaffer's tape to fix level controls is no longer necessary.

Is that all?

No, there is more. The LDK 150's ergonomic design and perfect balance -thanks to a low center of gravity and fully adjustable shoulder pad- guarantee quick and sure operation, leaving the operator complete freedom to concentrate on the subject in front of the lens. Don't forget that the LDK 150 accepts film-style lenses and accessories to further enhance the quality of your work. Options like a Serial Digital Video output with embedded digital audio allows you to simultaneously record material on DVCPRO50 tape and stream the footage into non-linear editing facilities. And in combination with the local control panel, LCP100, the SDI output also makes a comprehensive set-up for a vision engineer possible. Reason enough to contact your local Thomson representative for a closer look.

We are sure you will agree … with the LDK 150 12-bit Digital DVCPRO50 Camcorder, you have found the camcorder that matches up to your performance.

- User Smart Card with 4 scene files and 2 operator files
- User-friendly LCD operating panel
- New Software upgrades via serial link and PC
- Black stretch button
- Excellent Intelligent Digital Automatic Gain Circuit for audio
- 12-bit Video A/D for High-Res pictures
- Top-end Digital Audio Processing with 22-bit Audio A/D
- Dual skin contour circuits with automatic skin tone selection
- Optional Digital Serial output with embedded 20 bits audio
- Optional built-in wireless microphone receiver
- Being part of the LDK 100 series assures excellent flexibility
- 4 Camera files
- "Green button" for fast reset to customer file
- Different user levels for excellent user-friendliness
- Owner Smart Card for securing user levels, and customer file
- Optional 5" viewfinder mount
- CVBS input for recording an external source signal
- Fluorescent light matrix
- No-compromise 16/9:4/3 switchability with DPM sensors
- Viewfinder signal output
- Optional zoom control hand-grip makes awkward shots easy
- Possibility to lock audio levels for external sources
- Extensive built-in diagnostics
- Optional XLR-7 audio connector for mixer
- Built-in self-calibration circuits and software
- 2 lens files stored in the camcorder
- Continuous auto black: perfect black levels, no black balance required
- Possibility to increase/decrease color temperature setting
- User-defined gain steps
- Through-the-lens continuous auto white
- Extended iris: combined auto gain, iris and exposure time
- 3 ND filters: no color filters required
- Low center of gravity
- Supports Anton Bauer auto-light system and InterActive fuel computer
- Easy operation, no manual required
- Optional 26-pin VTR connector
- Two Intels inside for picture/audio control, diagnostics, and automatics
- Comfortable wide-range adjustable shoulder pad
- Excellent viewfinder (optional) giving: Improved resolution, 48 mm diameter, 100 mm focal distance lens. Most important indications visible without disturbing the picture
- Accepts Lithium Ion battery voltage range
- CVBS output including color playback
- 63 minutes' recording time
- Genlock and time code lock
- Record review
- Remote control of camera and VTR using a wireless infra-red remote control

** For more information on accessories and Smart Touch™ see our separate brochures Camera and Camcorder Accessories and Smart Touch™, available from your Thomson representative or from* ***www.thomsonbroadcast.com***

DVCPRO 50

TECHNICAL SPECIFICATIONS

GENERAL

Power requirements	DC 12V (11.0 V to 17.0 V)
Power consumption	27.5 W (rec/play mode, incl. viewfinder)
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Operating humidity	<85%
Weight	4.9 kg (including viewfinder)

CAMERA SECTION

Pick-up device	3-chip 2/3" FT or 2/3" DPM
Picture elements	NTSC: 1000 (H) x 498 (V) PAL: 1000 (H) x 594 (V)
Digital quantization	12 bits A/D
Digital signal processing	18 MHz and 36 MHz, >22 bits accuracy
Sensitivity	2000 lux at F9.0, 89.9% reflection(Typical)
Minimum illumination	approx. 1 lux (F1.4 lens, +36 dB gain)
Exposure control	down to 1/1000
Clean scanning	NTSC: 61.1 - 151.0 Hz PAL: 51.0 - 103.0 Hz
Optical system	F1.4 with quartz filter
Optical filters	clear, 1/4 ND, 1/16 ND, 1/64 ND
Modulation depth	70 % typ. at 5 MHz (equals Hor. Resolution of 850 TV lines 4:3 and 700 TV lines 16:9)
Vetrical Resolution (TV lines)	PAL: 480, NTSC: 400
S/N ratio	NTSC: 63 dB (typical) PAL: 61 dB (typical)
Registration	<0.05% (all zones, without lens)
Dynamic range	>600%
Gain	-6 dB to 36 dB in 3 dB steps (user defined presets)

VTR SECTION

Format	Switchable DVCPRO/DVCPRO50 digital audio/videorecording
Cue	1 channel (ch 1/2/mix)
CTL	1 track
Tape	1/4-inch Metal Particle tape
Cassette size	97.5 x 64.5 x 14.6 mm (3.8" x 2.5" x 0.6")
FF/REW time	Approx. 3 min. using DP121-66M
DVCPRO	
Digital audio	2x1 channels
Max. recording time	66 min. with DP121-66M
Tape speed	33.820 mm/s
DVCPRO50	
Digital audio	2x2 channels
Max. recording time	33 min. with DP121-66M
Tape speed	67.640 mm/s

Video performance

DVCPRO	
Sampling	4:1:1
Sampling frequency	Y: 13.5 MHz, Cr,Cb = 3.375 MHz
Compression ratio	5:1
Bitrate	25 Mb/s
DVCPRO50	
Sampling	4:2:2
Sampling frequency	Y: 13.5 MHz, Cr,Cb = 6.75 MHz
Compression ratio	3:3:1
Bitrate	50 Mb/s
DVCPRO/DVCPRO50	
Quantization	8 bits/sample
Error correction	Reed-Solomon code
Bandwidth	Y: 0 to 5.75 MHz + 1/-3 dB
S/N ratio	>55 dB
K factor (2T)	<2%
Linearity	<2%
Y/C delay	<20ns

Audio performance

Sampling	48 kHz, 22 bits
Processing	24 bits (down converted using noise shaping to 20 bits for dig. ser. out, 16 bits to tape)
Frequency response	20 Hz to 20 kHz, + 1.0/-1.0 dB
Dynamic range	>100 dB
Signal to noise on tape	>90 dB (typ. 95 dB at 1 kHz)
Distortion	<0.008% (20 Hz to 20 kHz)
Channel separation	>80 dB (1 kHz)
Eff. input noise (MIC)	-128 dBu

INPUTS

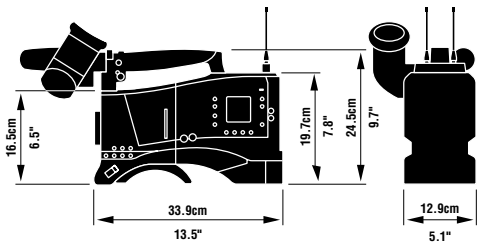
Video/gen lock	BNC (1.0 Vp-p, 75 Ohm)
Time code	BNC, 1 Vp-p, approx. 560 ohm
Front mic	1 x XLR 3, balanced, +48 V
Mic/line	2 x XLR 3, balanced (48 V selectable)
Mic impedance	2 kOhm (mic level selected)
Line impedance	10 kOhm (line level selected)
PC interface	RS-232, 9 pin (also used for control panel)
DC 12 V	XLR 4

OUTPUTS

Video (CVBS)	BNC (1.0 Vp-p, 75 Ohm)
Viewfinder	20 pin
Viewfinder monitor (Y)	BNC (1.0 Vp-p, 75 Ohm)
Digital serial (option)	SMPTE 259M-C/EBU Tech 3267E
Time code	BNC, 1.0Vp-p, 75 Ohm
VTR connector (option)	26-pin, component video,
or Audio I/O (option)	XLR 7
Audio	XLR 3, balanced ch. 1/2/mix, or unbalanced ch. 1 and 2
nom. level	-20 dBFS/ -18 dBFS
max. level	+17 dBu (balanced)
impedance	50 Ohm
DC	12 V, 4 pin
Earphone	mini jack
Lens	12 pin

SUPPLIED ACCESSORIES

1.5" viewfinder (optional)	Raincover
Shoulder strap	Anton Bauer gold mount plate
User manual	IR remote control
Owner Card (1x)	User Card (2x)
Smart-Touch™ (optional)	Serial digital output (optional)



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